



114,558

Application Date: 18th Feb., 1941. No. 388/41.

Applicant (Assignee of Actual Inventor) METAL AND MOUNTING MANUFACTURERS
Actual Inventor PTY. LIMITED
Application and Provisional Specification ERNEST MATE, of New South Wales
Complete Specification after Provisional Accepted, 6th March, 1941.
Specification Lodged, 8th November, 1941.
Complete Specification Accepted, 16th January, 1942.
Acceptance Advertised (Sec. 50) 20th January, 1942.

Class 06.6.

Drawings attached.

COMPLETE SPECIFICATION

"Improvements relating to electric torches."

We, METAL AND MOUNTING MANUFACTURERS PTY. LIMITED, carrying on business as Manufacturers, at 3, St. Peter's Street, Darlinghurst, near Sydney, in the State of New South Wales, Commonwealth of Australia, hereby declare this invention and the manner in which it is to be performed, to be fully described and ascertained in and by the following statement:—

10 This invention relates to electric torches of the kind capable of operating at fixed and also at changeable focal points.

15 The torch consists of a hollow body provided with a tubular member secured through the front of the body and having a lamp at its front end.

20 The lamp is mounted on a spring blade which is secured at its lower end to the body and has an intermediate part adapted for engaging an electric contact of the lamp and passing through the insulated material of the body to the inside of the body where it is engaged by the dry cell terminal previously referred to.

25 The body also has a spring blade which is secured at its lower end to the body and has an intermediate part adapted for engaging an electric contact of the lamp and passing through the insulated material of the body to the inside of the body where it is engaged by the dry cell terminal previously referred to.

This member is screw threaded on other side formed to receive an electric lamp or bulb. Preferably the lamp is screwed into a socket in the said member and the latter has a metallic contact adapted to engage a central contact of the lamp and pass through the insulated material of the body to the inside of the body where it is engaged by the dry cell terminal previously referred to. The body also has a spring blade which is secured at its lower end to the body and has an intermediate part adapted for engaging an electric contact of the lamp and passing through the insulated material of the body to the inside of the body where it is engaged by the dry cell terminal previously referred to. The body also has a spring blade which is secured at its lower end to the body and has an intermediate part adapted for engaging an electric contact of the lamp and passing through the insulated material of the body to the inside of the body where it is engaged by the dry cell terminal previously referred to.

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the torch and project outwardly similar to the rear piece of the front blade of the member.

There is a head or shoulder formed on the body at short distance from the front thereof upon which a sleeve member is supported.

The sleeve member carries the usual reflector and lens and forms the upper cap of the torch.

The sleeve member is capable of turning and sliding movement upon the top of the torch body and is provided with a focusing guide slot in which the resilient pin is engaged. A second slot termed the switch slot, is also formed in the sleeve and through which the said push piece projects while at another position on the sleeve a round hole is formed through which the push piece may alternately pass.

The invention in one form provides a means for flashing or used for illuminating a surface or for projecting a beam of light.

The invention in another form may be used for illuminating a surface or for projecting a beam of light. It is provided for focusing with a continuous beam of light and is not provided with a switch.

In the above sense the device includes a push piece held down by hand. In order to protect the lamp from shock or damage should the torch be dropped a resilient shock absorber is provided upon the sleeve member and also if desired upon the body cap.

In order that the invention may be more readily understood reference will now be made to the accompanying drawing.

Figure 1 is an expanded view of the complete torch showing the upper cap, the body and the torch cap.

Figure 2 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 3 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 4 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 5 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 6 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 7 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 8 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 9 is a detail view of the upper cap showing the position of the focusing pin and the push piece for focusing with a continuous beam.

The cylindrical metal body 10 which receives the dry cell 11. Figure 4, is closed at its lower end by a screwed cap 12 of usual construction and is also closed at its upper end by a disc 13 of insulating material. This disc 13 receives an electric lamp 34. As illustrated a screw threaded 15 socket 14 is provided for this purpose. The disc 13 has formed therewith a central contact 15 which is adapted to engage the central dry cell terminal 16 and provide a centre contact for the lamp 34 when screwed into the threaded socket 14. With a screw socket type of lamp the thread of the lamp 34 is adapted to engage the central contact 15 and the screw 14 is adapted to engage the central contact 15. The lamp 34 is adapted to be engaged by a spring blade 30 which is secured at one end to the body 10 by rivets 19. This said end of the spring member 18 is bent to form a resilient space 20 for the dry cell 11. Figure 4.

The switch member 18 has a push piece 21 and when pressed inwardly engages the limb 36 of fitting 17. The return spring for the lamp is from the casing 10 through the usual spring 37 in cap 12 to the base of the lower dry cell 11 in well known manner.

A second spring blade 22 is secured to the body 10. Figure 2 and 3.

Figure 2 and 3 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 3 and 4 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 4 and 5 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 5 and 6 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 6 and 7 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 7 and 8 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 8 and 9 show the position of the focusing pin and the push piece for focusing with a continuous beam.

Figure 9 and 10 show the position of the focusing pin and the push piece for focusing with a continuous beam.

lens 27, a convex reflector 28, Figure 1, which together with lens 29 is retained in position by an annular shock absorber 30 of resilient material. It will be observed that as illustrated in Figures 1, 6 and 7, the sleeve member 25 has two diagonal focusing slot portions 31 and 32 extending from the transverse guiding or focusing slot portion 24 and that in addition to the hole 26 for the push piece 21 there is a diagonal slot 33 in which the said push piece 21 may move.

When the sleeve member 25 is placed upon the body 10, see Figure 6, the focusing pin 23 is depressed and finally enters the transverse slot 24, while at the same time the push piece 21 is depressed and finally enters hole 26. This position, Figure 6, may be considered as the normal position of the sleeve member 25, the position of the body 10, the focusing pin 23, and the push piece 21. At this position the focusing pin 23 is in contact with the focusing pin guide 18 and the lamp 34 is in contact with the lamp guide 19 and the lamp 34 is in contact with the lamp guide 19 and the lamp 34 is in contact with the lamp guide 19.

When the sleeve member 25 is moved to the right, the focusing pin 23 is moved to the right and the push piece 21 is moved to the right. The sleeve member 24 is turned to the right and the focusing pin 23 is moved to the right and the push piece 21 is moved to the right. This may easily be effected as the push piece 21 has a spherical head which enables it to be depressed while it passes from hole 26 to diagonal slot 33. In this Figure 7 position, according to the degree of movement of the sleeve member 25, focusing may be achieved and the focusing pin 23 is in contact with the focusing pin guide 18 and the push piece 21 is in contact with the push piece guide 19 and the lamp 34 is in contact with the lamp guide 19.

In Figure 8 the extreme limit of focusing under the conditions has been attained.

It will be appreciated that various modifications may be made in the above construction without departing from the spirit of the invention, as defined by the appended claims.

Having now fully described and ascertained our said invention and the manner in which it is to be performed, we declare that what we claim is:

1. Improvements in electric torches, comprising a cylindrical body for receiving dry cells, said body having a screwed cap, a disc of insulating material secured to the body for receiving an electric lamp, said disc also having electrical contacts for the lamp, one of said contacts being capable of engagement with a switch blade member 35, the other contact being capable of engagement with a switch blade member 36, and a sleeve member 25, the sleeve member 25 having a hole to receive the said push piece 21, said body also having a transverse guiding slot in the sleeve member 25 for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

2. Improvements in torches as claimed in Claim 1, characterized in that the electrical contacts for the lamp consist of a central contact which engages both the lamp and the dry cell battery, and a U-shaped fitting one limb of which engages the lamp while the other limb is capable of being engaged by the switch blade member 35.

3. Improvements in torches as claimed in Claim 1, characterized in that the said slot in the sleeve has a horizontal portion and one or more diagonal portions, in which the sleeve member 25 may move.

4. Improvements in torches as claimed in Claim 1, characterized in that the sleeve member 25 has a hole to receive the push piece 21, said body also having a transverse guiding slot in the sleeve member 25 for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

5. Improvements in torches as claimed in Claim 1, characterized in that the sleeve member 25 has a hole to receive the push piece 21, said body also having a transverse guiding slot in the sleeve member 25 for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

6. Improvements in torches as claimed in Claim 1, characterized in that the sleeve member 25 has a hole to receive the push piece 21, said body also having a transverse guiding slot in the sleeve member 25 for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

the sleeve member has a reflector and a lens held in position by an annular shock absorber of resilient material.

7. Improvements in electric torches having a body and a movable sleeve member carrying a reflector and a lens characterized in that the body has a resilient guide pin and a contact making push piece, said guide pin functioning to guide the sleeve with respect to the body and also serving to focus the beam from the torch, said push piece being capable of manual depression at a fixed focal point and also of being depressed manually at variable focal points, 15 said push piece being further capable of

being automatically depressed to give a continuous beam at a fixed focal point or alternatively at variable focal points.

8. An improved electric torch substantially as described and as illustrated in the accompanying drawing.

Dated this 7th day of November, 1941.

METAL AND MOLDING MANUFACTURERS
PTY. LIMITED.

By its Patent Attorneys,

EDWARD WATERS & SONS,

Fellow Institute of Patent Attorneys
of Australia.

Witness my hand and seal.

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